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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/315,806 | 05/21/1999 | MARTIN M. DENEROFF | 15-4-737.00 | 6955 |

7590 11/15/2004

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| EXAMINER |
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MYERS, PAUL R

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| ART UNIT | PAPER NUMBER |
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2112

DATE MAILED: 11/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/315,806

Applicant(s)

DENEROFF ET AL.

Examiner

Paul R. Myers

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 9/20/04 have been fully considered but they are not persuasive.

In regards to applicants argument that neither Amini et al nor Trantanella teach being able to control what devices are coupled to the bus: Clearly both Amini et al and Trantanella teach controlling what devices are coupled to the bus. The examiner is unclear as to what applicants are trying to indicate is the difference between the claimed invention and the prior art. Applicants specification shows the devices sending requests to the bus controller/arbitration logic to access/couple the device to the bus. Then the arbitration logic sends a signal to the switches allow access/couple the devices to the bus. This is exactly what the combination of Amini et al and Trantanella teach. Amini et al teaches a device sending a request to access/couple to the bus, the arbitration logic sends a grant that allows the device to couple to the bus. While Trantanella teaches the structure of the standard tristate switches that couple a device to the bus in response to a bus grant signal. The examiner believes in accordance with the history of the applicants arguments that the applicants are trying to claim that the switches 18 of the specification are switches above and beyond the standard tristate switches in all devices attached to a multidrop bus. Even though the examiner has not been able to find support for this interpretation in the applicants specification the examiner has decided to also apply PN 6,260,159 to Garnett et al for teaching this feature.

The examiner is citing the PCI local bus specification in accordance with the BAPI recommendation.

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The IEEE Standard Dictionary of Electrical and Electronic Terms defines coupling as “The association of two or more circuits or systems in such a way that power or signal information may be transferred from one to another.”

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-20 rejected under 35 U.S.C. 103(a) as being unpatentable over Amini et al PN 5,396,602 in view of Trantanella PN 3,470,542.

In regards to claims 1 and 11: Amini et al teaches receiving a bus request (REQ); selecting the request according to a priority associated with the request (Abstract); generating a control signal in response to selection of the request (GNT); and enabling access to the bus in response to the control signal (Abstract). Amini et al does not expressly teach this enabling including switching the requesting devices into electrical connection with the bus. Although the examiner does not know of any interface that doesn't use switches (generally tri-state) to connect to the bus. Trantanella expressly teaches an interface unit including switches that are enabled to provide access to a bus in response to a control signal (Figure 3). It would have been obvious to use switches to connect the requesting device to the bus because this would have prevented signal contention that would be caused by having all devices directly connected to the bus without any I/O buffers.

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In regards to claims 2 and 15: Amini et al teaches the bus being PCI.

In regards to claims 3,16 and 20: Amini et al teaches the well known standard centralized PCI bus arbitration claimed above. Amini et al however teaches the older PCI standard of 33 Mhz and not the newer 66 or 100 Mhz PCI bus standards. Official notice is taken that the 66 Mhz PCI and 100 Mhz PCI bus standards are very common in the art. It would have been obvious to a person of ordinary skill in the art at the time of the invention to have the well known standard arbitration method described by Amini et al comply with 66 Mhz and 100 Mhz PCI buses because this would have prevented the arbitration method of Amini et al from becoming out of date. The examiner further notes in response to the decision of the BAPI the PCI Local Bus Specification incorporated in Amini et al is cited in support of the Official notice.

In regards to claims 4, 13 and 18: Amini et al teaches the requests coming from devices requiring use of the bus.

In regards to claims 5-7 and 14: Amini et al teaches arbitrating between a plurality of requests and granting in order.

In regards to claims 8, 10, 17 and 19: Both Amini et al and Trantanella teach disabling output of one device so another can access the bus.

In regards to claims 9 and 12: Amini et al teaches a limited number of requesters.

4. Claims 3,16 and 20 rejected under 35 U.S.C. 103(a) as being unpatentable over Garnett et al PN 6,260, 159 in view of the PCI Local Bus Specification.

In regards to claims 3,16 and 20: Amini et al teaches the well known standard centralized PCI bus arbitration claimed above. Amini et al however teaches the older PCI

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standard of 33 Mhz and not the newer 66 or 100 Mhz PCI bus standards. The PCI Local Bus Specification teaches that the 66 Mhz PCI and 100 Mhz PCI bus standards are known. It would have been obvious to a person of ordinary skill in the art at the time of the invention to have the well known standard arbitration method described by Amini et al comply with 66 Mhz and 100 Mhz PCI buses because this would have prevented the arbitration method of Amini et al from becoming out of date.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-2, 4-15 and 17-19 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Garnett et al PN 6,260,159.

In regards to claims 1 and 11: Garnett et al teaches a method of providing access to a bus, comprising: receiving a request for device access to the bus (Figure 26 item 193); selecting the request according to a priority associated with the request (in 185 Column 17 lines 48-53); generating a control signal in response to selection of the request (194); enabling a switch (33, Column 4 lines 53-67) associated with the request to couple a device associated with the request to the bus in response to the control signal.

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In regards to claims 2 and 15: Garnett et al teaches the bus is a PCI bus.

In regards to claims 4, 13 and 18: Garnett et al teaches the requests coming from devices requiring use of the bus.

In regards to claims 5-7 and 14: Garnett et al teaches arbitrating between a plurality of requests and granting in order.

In regards to claims 8, 10, 17 and 19: Garnett et al teaches disabling output of one device so another can access the bus.

In regards to claims 9 and 12: Garnett et al teaches a limited number of requesters.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul R. Myers whose telephone number is 571 272 3639. The examiner can normally be reached on Mon-Thur 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on 571 272 3632. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Paul R. Meyer", is located in the lower right quadrant of the page.

PRM

November 8, 2004